

WHAT IS CLAIMED IS:

1. An image-pickup apparatus comprising:

an information acquiring means for, prior to actual photographing, acquiring information concerning a dynamic range, which is required to photograph a photographic scene, with a condition for exposure varied diversely;

an analyzing means for analyzing the information acquired by said information acquiring means;

a conditions-for-photographing setting means for setting the conditions for actual photographing according to the result of the analysis performed by said analyzing means; and

a photographing means for performing actual photographing under the conditions for actual photographing set by said conditions-for-photographing setting means.

2. The image-pickup apparatus according to Claim 1, wherein said analyzing means includes:

an information synthesizing means for synthesizing the information concerning a dynamic range acquired by said information acquiring means; and

a histogram arithmetic means for producing a histogram of the synthesized information.

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3. The image-pickup apparatus according to Claim 1, further comprising an image information converting means for converting an image produced during actual photographing according to the result of analysis performed by said analyzing means.

4. The image-pickup apparatus according to Claim 1, wherein said analyzing means includes:

an information synthesizing means for synthesizing the information concerning a dynamic range acquired by said information acquiring means;

a histogram arithmetic means for producing a histogram of the information synthesized by said information synthesizing means; and

a gray scale arithmetic means for producing a gray scale conversion characteristic curve using a histogram, which represents the distribution of frequencies that are equal to or larger than a predetermined value among the values of frequencies contained in the histogram produced by said histogram arithmetic means.

5. The image-pickup apparatus according to Claim 1, wherein the information concerning a dynamic range acquired by said information acquiring means is luminance information concerning a photographic scene.

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6. The image-pickup apparatus according to Claim 1, wherein the conditions for actual photographing set by said conditions-for-photographing setting means are information needed to drive a shutter.

7. The image-pickup apparatus according to Claim 1, wherein said photographing means includes a flashlight emitting means that irradiates light to a photographic scene, and said flashlight emitting means is controlled based on the conditions for actual photographing set by said conditions-for-photographing setting means.

8. The image-pickup apparatus according to Claim 1, wherein the conditions for actual photographing set by said conditions-for-photographing setting means are information concerning a plurality of exposure levels that signifies different exposures.

9. The image-pickup apparatus according to Claim 1, wherein said photographing means performs actual photographing during which exposure is performed a plurality of times under the conditions for actual photographing with a condition for exposure, which is included in the conditions for actual photographing, varied.

10. The image-pickup apparatus according to Claim 1, wherein:

said conditions-for-photographing setting means includes a control means that judges from the result of analysis performed by said analyzing means whether a condition for exposure under which said information acquiring means acquires information is appropriate; and

if said control means judges that the condition for exposure is inappropriate, said control means changes the condition for exposure and instructs said information acquiring means to acquire information again.

11. The image-pickup apparatus according to Claim 10, wherein when said control means changes a condition for exposure that is judged to be inappropriate from the result of analysis performed by said analyzing means, said control means changes the condition for exposure to either or both of a condition for exposure making an image darker and a condition for exposure making an image brighter.

12. The image-pickup apparatus according to Claim 1, wherein said conditions-for-photographing setting means includes an adjusting means that adjusts the conditions for actual photographing set based on the result of analysis

performed by said analyzing means.

13. The image-pickup apparatus according to Claim 1, wherein said conditions-for-photographing setting means includes an adjusting means that adjusts the ratio of different conditions for exposure which signify a plurality of exposures and which are included in the conditions for actual photographing set based on the result of analysis performed by said analyzing means.

14. The image-pickup apparatus according to Claim 12, wherein said adjusting means adjusts the conditions for actual photographing, which are set based on the result of analysis performed by said analyzing means, according to a dynamic range required to photograph a photographic scene.

15. The image-pickup apparatus according to Claim 13, wherein said adjusting means adjusts the conditions for actual photographing, which are set based on the result of analysis performed by said analyzing means, according to a dynamic range required to photograph a photographic scene.

16. The image-pickup apparatus according to Claim 12, wherein said adjusting means checks the conditions for actual photographing set based on the result of analysis

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performed by said analyzing means, and adjusts the conditions for actual photographing if adjustment is judged to be necessary.

17. The image-pickup apparatus according to Claim 13, wherein said adjusting means checks the conditions for actual photographing set based on the result of analysis performed by said analyzing means, and adjusts the conditions for actual photographing if adjustment is judged to be necessary.

18. The image-pickup apparatus according to Claim 16, wherein the conditions for actual photographing to be checked by said adjusting means include at least one of information concerning an exposure level and information of an f-number.

19. The image-pickup apparatus according to Claim 17, wherein the conditions for actual photographing to be checked by said adjusting means include at least one of information concerning an exposure level and information of an f-number

20. The image-pickup apparatus according to Claim 12, wherein said photographing means includes a flashlight

emitting means that irradiates light to a photographic scene, and said adjusting means adjusts the conditions for actual photographing according to the use situation of said flashlight emitting means.

21. The image-pickup apparatus according to Claim 13, wherein said photographing means includes a flashlight emitting means that irradiates light to a photographic scene, and said adjusting means adjusts the conditions for actual photographing according to the use situation of said flashlight emitting means.

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